WHAT IS CLAIMED IS:

1. An electro-luminescence display device, comprising:

a plurality of pixels arranged in a matrix type;

a plurality of data lines for applying video signals to the pixels; and

a plurality of gate lines crossing the data lines, one of the gate lines connected to the pixels positioned adjacently to each other at the upper and lower sides of the gate line.

2. The electro-luminescence display device according to claim 1, further comprising:

a gate driver for applying a gate signal having a turn-on potential during two horizontal periods to the gate lines.

3. The electro-luminescence display device according to claim 2, wherein a gate signal applied to the ith gate line (wherein i is an integer) overlaps a gate signal applied to the (i+1)th gate line during one horizontal period.

4. An electro-luminescence display device, comprising:

electro-luminescence cells arranged in a matrix type at crossings of gate lines and data lines;

a supply voltage line for supplying a driving voltage to the electro-luminescence cells;

driving circuits for controlling a current applied from the driving voltage of the supply voltage line to the electro-luminescence cells in response to video signals; and

control circuits for applying the video signals to the driving circuits.

5. The electro-luminescence display device according to claim 4, wherein each of the driving circuits includes:

a first driving circuit provided at the ith horizontal line (wherein i is an integer) to apply the current to the electro-luminescence cell positioned at the ith horizontal line, in response to a video signal from the control circuit controlled by the ith gate line, when a gate signal is applied to the (i-1)th gate line; and

a second driving circuit provided at the (i+1)th horizontal line to apply the current to the electro-luminescence cell positioned at the (i+1)th horizontal line, in response to a video signal from the control circuit controlled by the ith gate line, when a gate signal is applied to the (i+1)th gate line.

6. The electro-luminescence display device according to claim 5, wherein the control circuit is positioned between the first driving circuit and the second driving circuit.

7. The electro-luminescence display device according to claim 5, wherein the (i+1)th gate line is connected to a driving circuit provided at the (i+2)th horizontal line.

8. The electro-luminescence display device according to claim 5, wherein the (i-1)th gate line is connected to a driving circuit provided at the (i-1)th horizontal line.

9. The electro-luminescence display device according to claim 5, wherein the first driving circuits includes:

a first driving thin film transistor having a source terminal connected to the supply voltage line and a drain terminal connected to the electro-luminescence cell positioned at the ith horizontal line;

a second driving thin film transistor having a drain terminal connected to a gate terminal of the first driving thin film transistor, a source terminal connected to the control circuit and a gate terminal connected to the (i-1)th gate line; and

a storage capacitor connected between the source terminal and the gate terminal of the first driving thin film transistor.

10. The electro-luminescence display device according to claim 5, wherein the second driving circuits includes:

a first driving thin film transistor having a source terminal connected to the supply voltage line and a drain terminal connected to the electro-luminescence cell positioned at the (i+1)th horizontal line;

a second driving thin film transistor having a drain terminal connected to a gate terminal of the first driving thin film transistor, a source terminal connected to the control circuit and a gate terminal connected to the (i+1)th gate line; and

a storage capacitor connected between the source terminal and the gate terminal of the first driving thin film transistor.

11. The electro-luminescence display device according to claim 9 or 10, wherein the control circuit includes:

a first control thin film transistor having a source terminal connected to the supply voltage line and a drain terminal and a gate terminal connected to the source terminal of the second driving thin film transistor; and

a second control thin film transistor having a drain terminal connected to the gate terminal of the first control thin film transistor, a source terminal connected to the data line and a gate terminal connected to the ith gate line.

12. The electro-luminescence display device according to claim 11, wherein any one of the first and second control thin film transistors is provided at the ith horizontal line while the remaining control thin film transistor is provided at the (i+1)the horizontal line.

13. The electro-luminescence display device according to claim 11, further comprising:

a gate driver for applying a gate signal having a turn-on potential during two horizontal periods to the gate lines.

14. The electro-luminescence display device according to claim 13, wherein a gate signal applied to the ith gate line overlaps a gate signal applied to the (i+1)th gate line during one horizontal period.

15. The electro-luminescence display device according to claim 13, wherein, if a gate signal is applied to the (i-1)th and ith gate lines, then the second driving thin film transistor connected to the (i-1)th gate line and the second control thin film transistor connected to the ith gate line are turned on; and

as the second control thin film transistor is turned on, a video signal from the data line is applied to the first driving thin film transistor and the first control thin film transistor that are positioned at the ith horizontal line.

16. The electro-luminescence display device according to claim 15, wherein the first driving thin film transistor positioned at the ith horizontal line applies the current corresponding to the video signal to the electro-luminescence cell provided at the ith horizontal line.

17. The electro-luminescence display device according to claim 15, wherein the first control thin film transistor applies the current corresponding to the video signal from the supply voltage line to the data line.

18. The electro-luminescence display device according to claim 17, wherein a voltage corresponding to the current flowing in the first control thin film transistor is stored in the storage capacitor.

19. An electro-luminescence display device, comprising:

a plurality of pixels arranged in a matrix type;

a plurality of data lines for applying video signals to the pixels;

a plurality of gate lines crossing the data lines, one of the gate lines being shared with the pixels positioned adjacently to each other at the upper and lower sides

of the gate line;

electro-luminescence cells provided for each pixel;

a supply voltage line for supplying a driving voltage to the electro-luminescence cells;

driving circuits for applying a current corresponding to the video signals to the electro-luminescence cells in response to the video signals; and

control circuits connected to the data lines to apply the video signals supplied to the data lines to the driving circuits.

20. The electro-luminescence display device according to claim 19, further comprising:

a gate driver for applying a gate signal having a turn-on potential during two horizontal periods to the gate lines.

21. The electro-luminescence display device according to claim 20, wherein a gate signal applied to the ith gate line (wherein i is an integer) overlaps a gate signal applied to the (i+1)th gate line during one horizontal period.

22. The electro-luminescence display device according to claim 21, wherein each of the driving circuits includes:

a first driving circuit provided at the ith horizontal line (wherein i is an integer) to apply the current to the electro-luminescence cell positioned at the ith horizontal line, in response to a video signal from the control circuit controlled by the ith gate line, when a gate signal is applied to the (i-1)th gate line; and

a second driving circuit provided at the (i+1)th horizontal line to apply the current to the electro-luminescence cell positioned at the (i+1)th horizontal line, in response to a video signal from the control circuit controlled by the ith gate line, when a gate signal is applied to the (i+1)th gate line.

23. The electro-luminescence display device according to claim 22, wherein one of the control circuits is positioned between the first driving circuit and the second driving circuit.

24. A method of driving an electro-luminescence display device, comprising:

applying a gate signal having a turn-on potential during two horizontal periods to gate lines,

wherein the gate signal applied to the ith gate line (wherein i is an integer) overlaps the gate signal applied to the (i-1)th gate line during one horizontal period.

25. The method according to claim 24, wherein a current corresponding to a video signal is applied to an electro-luminescence cell provided at the ith horizontal line during the one horizontal period in which the gate signal applied to the (i-1)th gate line overlaps the gate signal applied to the ith gate line.